

REQUEST FOR RECONSIDERATION UNDER 37 C.F.R. § 1.116
U.S. Patent Application No. 09/751,844

REMARKS

Claims 2, 3, 6-9 and 12-23 presently are pending in the application, with claims 12-21 being withdrawn from consideration as being directed to a non-elected invention (i.e., the method of making a circuit board). The Examiner indicates that claims 6-9 and 23 are allowed.

However, the Examiner has rejected claims 2, 3 and 22 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,423,907 (Haba et al.). For the following reasons, this rejection is respectfully traversed.

In the rejection of claims 2, 3 and 22 under § 102(e), the Examiner maintains that Haba allegedly discloses all of the recitations of claims 2, 3 and 22 including a plurality of dielectric supporters 341 for supporting the transmission lines, between the substrates in each of the lines in order to isolate the lines in a predetermined interval apart from the upper surface of the substrate. The Examiner specifically references FIG. 16 of Haba and column 11, lines 20-50.

Haba relates to components useful in making electrical connections to microelectronic elements such as semiconductor chips, and to methods of manufacturing such components.

More specifically, FIGs. 15-19 depict a component in a process according to an embodiment of Haba. With reference to FIGs. 15 and 16, Haba discloses a starting structure incorporating a support substrate having a top polymeric layer 322 and an electrically conductive potential plane or ground plane layer 323 remote from the exposed surface 326 of the top dielectric layer. Numerous leads 324, of which only one is shown in FIG. 15, are provided on the exposed surface 326. Each lead includes a first end 328, a second end 330 and an elongated, narrow section 332 extending therebetween. The anchor section 333 of each lead adjacent the

REQUEST FOR RECONSIDERATION UNDER 37 C.F.R. § 1.116
U.S. Patent Application No. 09/751,844

first end remains fully attached to the unetched surface 326, and the second end 330 is connected to the etched surface 326' of dielectric layer 322 by a narrow, frangible connecting element 346.

A conformal coating 341 of a dielectric material is applied on the portions of the leads 324 disposed within the opening 339 of the mask. As shown in FIG. 17, the conformal coating 341 forms a continuous dielectric jacket surrounding elongated lead portions 332. Further, a continuous layer of an electrically conductive material, preferably a metal such as copper or gold, is applied such as to form a metallic coating 357 surrounding the dielectric layer 341 in the elongated portion 332 of each lead (see FIGs. 18 and 19).

Based on the foregoing, Applicants submit that the Examiner's position and analysis are clearly unreasonable for several reasons. First, Applicants' independent claim 2 recites "further comprising a plurality of dielectric supporters for supporting the transmission lines, between the dielectric substrate and each of the transmission lines in order to isolate the transmission lines a predetermined interval apart from the upper surface of the dielectric substrate". In contrast, while Haba discloses a plurality of leads 324 which can reasonably be considered as transmission lines, Haba quite clearly fails to teach or even suggest a *plurality* of dielectric supporters for supporting the transmission lines, between the dielectric substrate and *each* of the transmission lines. This is because while FIG. 16 shows a dielectric coating 341, Haba clearly identifies FIG. 16 as depicting an intermediate stage of the formation process. Quite clearly FIGs. 18 and 19 show that a continuous layer of electrically conductive material such as copper or gold form a metallic coating 357 surrounding the dielectric layer 341 and the elongated portion 332 of each lead. Thus, each lead while containing dielectric material in a core portion, is basically a

REQUEST FOR RECONSIDERATION UNDER 37 C.F.R. § 1.116
U.S. Patent Application No. 09/751,844

metallic conductive member. Moreover, a portion of each of the leads 324 which directly contacts the exposed surface 326 (see FIG. 16) of the top of the dielectric layer 322 is in direct contact therewith, i.e., metal to substrate contact without any intervening dielectric layer 341 therebetween. That being the case, there is no portion of the dielectric material 341 which serves to support any portion of the lead 324 on the substrate. In other words, on the one side of the lead closest to the end 328, there is only direct contact of the metal lead with the exposed surface 326 of the top of the dielectric layer 322, while there is clearly a space between the remaining portion of the lead, which is coated with the coating 341 and the metallic layer 357, and the upper surface of the substrate to the right hand side of FIG. 18.

Further, not only do the coated portions 341 not serve as supports, but even if, *arguendo*, they could somehow act as supports, there is only one coating portion per lead and not a plurality of portions which could possibly serve as a *plurality* of dielectric supporters.

The dependent claims 3 and 22 are patentably distinct for the reasons noted above with respect to claim 2.

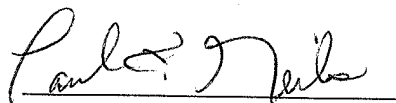
Based on the foregoing, Applicants traverse the prior art rejection based on § 102(e) in view of the fact that the reference clearly fails to recite all of the structural elements set forth in Applicants' claim 2.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

REQUEST FOR RECONSIDERATION UNDER 37 C.F.R. § 1.116
U.S. Patent Application No. 09/751,844

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Paul F. Neils
Registration No. 33,102

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE



23373

PATENT TRADEMARK OFFICE

Date: March 14, 2003

Attorney Docket No.: Q62175